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TITLE: SEMICONDUCTOR DEVICE WITH BUILT-IN EPROM

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ABSTRACT:

PURPOSE: To relax a stress to a pellet surface caused by a thermal stress by applying a polyimide film excepting an upper part of a gate electrode of a memory transistor (EPROM element) to form a passivation film.

CONSTITUTION: A passivation film is composed of a silicon nitride film 9 covering a semiconductor chip surface and a polyimide film 10. The silicon nitride film 9 prevents a direct contact between a polyimide film 10 and an aluminum wiring 7. Although the polyimide film has good evenness, it is opaque to ultraviolet rays. However, since a window 11 is provided above a floating gate electrode 3, it is possible to carry out writing in a wafer state and erasing after characteristics check. It is not necessary to provide the window

11 to each EPROM element and one can be provided to an entire of the EPROM part. Anyway, it is only required to apply a polyimide film all over and to form a window thereafter by selectively removing it by photolithography technique.

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